

WHAT IS CLAIMED IS:

1. A medical device comprising:
a handle;
an end effector assembly; and
an elongate, flexible member connecting the handle to the end effector assembly,
wherein the handle defines at least one groove configured to accommodate at least one of a portion of the elongate member and a portion of the end effector assembly.
2. The medical device of claim 1, wherein the at least one groove is configured to receive at least one half of a cross-section of the elongate member.
3. The medical device of claim 1, wherein a width of the at least one groove is substantially the same as a diameter of the elongate member.
4. The medical device of claim 1, wherein the handle comprises an elongate portion and a spool portion disposed around the elongate portion.
5. The medical device of claim 4, wherein the at least one groove is defined by the spool portion.

6. The medical device of claim 4, wherein the spool portion comprises a proximal portion and a distal portion connected by a central portion.

7. The medical device of claim 6, wherein the at least one groove is defined by the proximal portion.

8. The medical device of claim 6, wherein the at least one groove is defined by the distal portion.

9. The medical device of claim 6, wherein one groove is on the proximal portion and another groove is on the distal portion.

10. The medical device of claim 9, wherein the grooves are aligned with each other.

11. The medical device of claim 9, wherein the grooves are on circumferentially corresponding portions of the proximal portion and the distal portion.

12. The medical device of claim 6, wherein a plurality of grooves are defined by the proximal portion and another plurality of grooves are defined by the distal portion, and

wherein the plurality of grooves are circumferentially aligned with the another plurality of grooves.

13. The medical device of claim 6, wherein the at least one groove extends through the proximal portion, the central portion, and the distal portion.

14. The medical device of claim 13, wherein a portion of the at least one groove is wider than the rest of the at least one groove.

15. The medical device of claim 1, wherein the at least one groove is configured to accommodate more than one portion of the elongate member.

16. The medical device of claim 1, wherein the at least one groove comprises at least two grooves.

17. The medical device of claim 17, wherein one of the at least two grooves is configured to accommodate more than one portion of the elongate member and the other of the at least two grooves is configured to accommodate one portion of the elongate member.

18. The medical device of claim 1, wherein the handle further comprises a channel configured to accommodate an end effector of the end effector assembly.

19. The medical device of claim 18, wherein the channel is defined by a spool portion of the handle.

20. The medical device of claim 19, wherein the spool portion comprises a proximal portion and a distal portion connected by a central portion.

21. The medical device of claim 20, wherein the channel is defined by the distal portion.

22. The medical device of claim 21, wherein the at least one groove is defined by the proximal portion, and

wherein a circumferential position of the at least one groove on the proximal portion is aligned with a circumferential position of the channel on the distal portion.

23. The medical device of claim 6, wherein the at least one groove is defined by the proximal portion and the central portion.

24. The medical device of claim 1, wherein the handle further comprises a notch configured to accommodate an end effector of the end effector assembly.

25. The medical device of claim 24, wherein the notch is defined by a spool portion of the handle.

26. The medical device of claim 25, wherein the spool portion comprises a proximal portion and a distal portion connected by a central portion, and wherein the notch is defined by the distal portion.

27. The medical device of claim 26, wherein the at least one groove is on the proximal portion, and

wherein the at least one groove and the notch are on corresponding portions of the proximal portion and the distal portion, respectively.

28. The medical device of claim 1, wherein the at least one groove is configured to receive a loop of the elongate member.

29. The medical device of claim 1, wherein the at least one groove is configured to receive loops of the elongate member.

30. The medical device of claim 1, wherein the at least one groove includes a radial groove and a circumferential groove.

31. The medical device of claim 30, wherein the radial groove and circumferential groove are connected.

32. The medical device of claim 1, further comprising a throughhole on the handle.

33. The medical device of claim 4, further comprising a throughhole on the spool portion configured to accommodate the elongate portion therethrough.

34. The medical device of claim 6, further comprising a throughhole extending through the proximal portion, central portion, and distal portion.

35. The medical device of claim 1, wherein the end effector assembly is biopsy forceps jaws.

36. The medical device of claim 1, wherein the end effector assembly is a pair of opposing biopsy forceps jaws.

37. The medical device of claim 6, wherein the at least one groove is defined by the central portion.

38. The medical device of claim 1, wherein the portion of the handle that defines the at least one groove is composed of a material configured to assist in retaining the portion of the end effector assembly.

39. The medical device of claim 24, wherein the portion of the handle that comprises the notch is composed of a material configured to assist in retaining the end effector of the end effector assembly.

40. A medical device comprising:
a handle;
an end effector assembly; and
an elongate, flexible member connecting the handle to the end effector assembly,
wherein at least one of a portion of the elongate member and a portion of the end effector assembly is disposed in at least one groove defined by the handle.

41. The medical device of claim 40, further comprising a plurality of grooves defined by the handle,
wherein a plurality of portions of the elongate member are disposed in the plurality of grooves.

42. The medical device of claim 40, further comprising a channel,
wherein the portion of the end effector assembly is disposed in the channel.

43. The medical device of claim 40, further comprising a notch,
wherein the portion of the end effector assembly is disposed in the notch.

44. The medical device of claim 40, wherein a plurality of portions of the elongate member are disposed in one of the at least one grooves.

45. The medical device of claim 40, wherein the at least one groove is defined by a spool portion of the handle.

46. The medical device of claim 45, further comprising a channel defined by the spool portion,
wherein the portion of the end effector assembly is disposed in the channel.

47. The medical device of claim 45, wherein the spool portion comprises a proximal portion and a distal portion connected by a central portion.

48. The medical device of claim 47, wherein the at least one groove is defined by the proximal portion.

49. The medical device of claim 47, wherein the at least one groove is defined by the distal portion.

50. The medical device of claim 47, wherein one groove is on the proximal portion and another groove is on the distal portion.

51. The medical device of claim 50, wherein one portion of the elongate, flexible member is disposed in the one groove and another portion of the elongate, flexible member is disposed in the another groove.

52. The medical device of claim 47, wherein the portion of the end effector assembly is disposed in a groove defined by the proximal portion and the central portion.

53. The medical device of claim 40, wherein the elongate member forms at least one loop.

54. The medical device of claim 40, wherein the elongate member forms a plurality of loops.

55. The medical device of claim 54, wherein at least some of the plurality of loops are disposed in the at least one groove.

56. The medical device of claim 54, wherein at least some of the plurality of loops are disposed in separate grooves.

57. The medical device of claim 54, wherein at least some of the plurality loops are disposed in separate pairs of grooves.

58. The medical device of claim 40, further comprising a channel defined by the handle,

wherein the portion of the end effector assembly is disposed in the channel.

59. The medical device of claim 40, further comprising a notch defined by the handle,

wherein the portion of the end effector assembly is disposed in the notch.

60. The medical device of claim 40, wherein the end effector assembly is biopsy forceps jaws.

61. The medical device of claim 40, wherein the end effector assembly is a pair of opposing biopsy forceps jaws.

62. A method of packaging a medical device comprising:

providing a medical device comprising:

a handle;

an end effector assembly; and

an elongate, flexible member connecting the handle to the end effector assembly,

wherein the handle defines at least one groove configured to accommodate at least one of a portion of the elongate member and a portion of the end effector assembly;

forming at least one loop of the elongate member; and

placing at least one of the at least one loop of the elongate member and the portion of the end effector assembly in the at least one groove.

63. The method of claim 62, further comprising forming a plurality of loops of the elongate member and placing at least some of the plurality of loops into the at least one groove.

64. The method of claim 62, wherein the medical device further comprises a channel, and

wherein the method further comprises placing the portion of the end effector assembly in the channel.

65. The method of claim 62, wherein the medical device further comprises a notch, and

wherein the method further comprises placing the portion of the end effector assembly in the notch.

66. The method of claim 62, wherein the at least one groove is defined by a spool portion of the handle.

67. The method of claim 66, wherein the spool portion comprises a proximal portion and a distal portion connected by a central portion.

68. The method of claim 67, further comprising placing one portion of the elongate member in one groove defined by the proximal portion; and

placing another portion of the elongate member in another groove defined by the distal portion.

69. The method of claim 67, further comprising placing the portion of the end effector assembly in a channel defined by the distal portion.

70. The method of claim 67, further comprising placing the portion of the end effector assembly in a channel defined by the proximal portion and the central portion.

71. The method of claim 67, further comprising forming a plurality of loops of the elongate member;

placing at least some of the plurality of loops in one groove defined by the proximal portion; and

placing at least some of the plurality of loops in another groove defined by the distal portion.